

KHOMYAKOV, M.V.

Concerning the possibility of drying transformer windings in  
tanks without oil drainage. Prom. energ. 19 no.8:56-57 Ag '64.  
(MIRA 17:11)

KHOMY/KOV, M.V., inzh.

For economical and scientifically approved use of insulating  
oils. Elek. sta. 35 no.6:73-74 Je '64.

(MIRA 18:1)

1. TSentral'naya vyskovol'naya laboratoriya Moskovskogo rayonnogo  
upravleniya energeticheskogo khozyaystva.

KHOMYAKOV, M.V.

Operation of selenium rectifiers. Prom. energ. 20 no.2:62 '65.  
(MIRA 18:4)

KHOMYAKOV, M.V.

Periodic tests of protective systems. Energetik 13 no.3:41 Mr '65.  
(MIRA 18:7)

KHOMYAKOV, M.V.

Reclamation of oil. Energetik 13 no.8:28 Ag '65. (MIRA 18:9)

1. Direktor Tsentral'noy vysokovol'tnoy laboratorii Moskovskogo  
rayonnogo upravleniya energeticheskogo khozyaystva.

NEPCROZHNIY, P.S.; SAVINYKH, A.P.; SAPOZHNIKOV, F.V.; SERDYUKOV, N.P.;  
ACHKASOV, D.I.; BURGSDORF, V.V.; NEMOV, N.P.; SYROMYATNIKOV, I.A.;  
KNYAZEVSKIY, B.A.; ROKOTYAN, S.S.; STEKLOV, V.Yu.; FEDOSEYEV, A.M.;  
GRUDINSKIY, P.S.; KHOMYAKOV, M.V.; VENIKOV, V.A.; CHERNOBROVOV, N.V.;  
MEL'NIKOV, N.A.; BERSHADSKIY, I.S.

Aleksandr Dmitrievich Romanov, 1905; on his 60th birthday. Elek.  
sta. 36 no.11:94 N '65. (MIRA 18:10)

GUREVICH, V.A., insh.; KHOMYAKOV, M.V., insh.

Nitric protection of insulating oil in power transformers.  
Elek. sta. 36 no.12:54-61 D '65. (MIRA 18:12)

KHOMYAKOV, M.V.

Separate orders on every connection. Energetik 13 no. 12:  
23 D '65 (MIRA 19:1)

1. Moskovskoye rayonnoye upravleniye energeticheskogo  
khozyaystva.



L 29166-66

SOURCE CODE: UR/0104/65/000/011/0004/0094

ACC NR: AP6018890

AUTHOR: Kaporozhniy, P. S.; Savinykh, A. P.; Sapozhnikov, F. V.; Sordyukov, N. P.;  
 Achkanov, D. I.; Burgsdorf, V. V.; Nemov, N. P.; Syromyatnikov, I. A.; Knyazovskiy,  
 B. A.; Rokotyan, S. S.; Steklov, V. Yu.; Fedoseyev, A. M.; Grudinskiy, P. S.;  
 Khomyakov, M. V.; Venikov, V. A.; Chernobrovov, N. V.; Mel'nikov, N. A.;  
 Bershadskiy, L. S.

21  
B

ORG: none

TITLE: Honoring the 60th birthday of Aleksandr Dmitriyevich Romanov

SOURCE: Elektricheskoye stantsii, no. 11, 1965, 94

TOPIC TAGS: electric power plant, industrial personnel

ABSTRACT: In July 1965 A. D. Romanov celebrated his 60th birthday and the 35th anniversary of his active life as a major designer, operator, and builder of electric power stations. On his graduation in 1927 from the Moscow College of Engineering, Aleksandr Dmitriyevich joined the Mosenergo Moscow Power System where he steadily rose through the ranks until he became Deputy Chief Engineer, while at the same time participating in the design and practical introduction of 500-kV electric transmission lines running from Moscow to Volzhskaya Hydroelectric Power Station and from Kuybyshev to the Urals. Since 1959 A. D. Romanov has been Chief Engineer at the Glavvostozelektrosnabstroy Main Administration for Power Grid Construction in Eastern USSR of the

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ACC NR: AP6018890

State Production Committee for Energetics and Electrification USSR. Along with his active work, since 1930 A. D. Romanov has been teaching courses in Power Networks and Systems as well as in Power Stations and Substations at the Moscow Correspondence Institute of Energetics and, later, at the All-Union Correspondence Institute of Energetics, and, in this capacity, has trained new cadres of power engineers. In 1957 the title of Assistant Professor was conferred on him and in 1963, the title of Candidate of Technical Sciences. He has published more than 40 scientific and technical articles on power engineering and construction and he is a member of the editorial boards of the periodic anthologies Energeticheskoye Stroitel'stvo (Power Construction) and Energeticheskoye Stroitel'stvo za Rubezhom (Power Construction Abroad). He has been a Party member since 1932 and is the bearer of the Order of Labor Red Banner as well as of various medals. Best wishes for further creative work are extended to him. Orig. art. has: 1 figure. *[initials]*

SUB CODE: 10 / SUM DATE: none

Card 2/2 *CC*

KHOMYAKOV, N., inzh. (Moskva); VAYNSHTEYN, G., inzh. (Moskva);  
KUZOVKIN, B.; LINTS, V., inzh. (Moskva); VOLIN, P. (Vil'nyus);  
GRYUKOV, N., inzh. (Moskva); SOLDATOV, V., inzh.-konstruktor  
(Orsk)

Conceived and realized. Izobr. i rats. no.4:34-35 '63.  
(MIRA 16:7)  
1. Starshiy inzh. tresta "Orenburgtransstroy", Orenburg (for  
Kuzovkin).  
(Technological innovations)

RUMYANTSEV, A.N., inzh.; KHOMYAKOV, N.D., inzh.

Inventiveness and improvement in efficiency in automobile  
repairing shops. Gor.khoz.Mosk. 36 no.6:44-47 Je '62.  
(MIRA 15:8)  
(Moscow—Automobiles—Maintenance and repair)

KHOMYAKOV, N.D.

Two suggestions made by F.F.Sazonov, a mechanic. Gor.khoz.  
Mosk. 36 no.11:36-37 N '62. (MIRA 15:12)

1. Upravleniye avtoremontnykh zavodov i avtotekhsnabzheniya  
Moskovskogo gorodskogo ispolnitel'nogo komiteta Mosgorsoвета  
deputatov trudyashchikhaya.  
(Technological innovations) (Sazonov, F.F.)

KHOMYAKOV, N. I. and LYASKOVSKIY, M. S.

"Experience in studying the faces of flying personnel with disorders of the vascular tonus" - p. 60

Voyenno Meditsinskiy Zhurnal, No. 3, 1962

KHAYKIN, Abram Borisovich; KHOMYAKOV, N.I., doktor tekhn. nauk, prof.,  
retsenzent; POLONSKIY, V.I., zas. deyatel' nauki i tekhniki,  
doktor tekhn. nauk, prof., red.; GORYANSKIY, Yu.V., red. izd-  
va; KOTLYAKOVA, O.I., tekhn. red.

[Dynamics of electric ship propulsion systems] Dinamika greb-  
nykh elektricheskikh ustanovok. Leningrad, Izd-vo "Morskoi  
transport," 1962. 639 p. (MIRA 16:4)  
(Ship propulsion, Electric)

KHOMYAKOV, N.M.; NORNEVSKIY, B.I., retsenzent; SIVERS, P.L., redaktor;  
VOLCHOK, K.M., tekhnicheskiiy redaktor

[Selection of electric motors for powered deck machinery] Vybor  
elektrodvigateli palubnykh elektroprivodov. Leningrad, Izd-vo  
"Morskoi transport," 1955. 267 p. (MLRA 9:7)  
(Electric motors)



KHAYKIN, A.B., kand.tekhn.nauk, starshiy nauchnyy sotrudnik; KHOMYAKOV, N.M.,  
red.; PETERSON, M.M., tekhn.red.

[Elements of modern technology of electric ship propulsion]  
Moscow. TSentral'nyi nauchno-issledovatel'skiy institut morskogo  
flota. [Elements of modern technology of electric ship propulsion]  
Elementy sovremennoi tekhniki transport," 1956. 69 p. (Informatsionnyi  
sbornik po obobshcheniyu opyta otechestvennoi i zarubezhnoi nauki i  
tekhniki, no. 2) (MIRA 11:7)

1.TSentral'nyy nauchno-issledovatel'skiy institut morskogo flota  
(for Khaykin).  
(Ship propulsion, Electric)

POLONSKIY, Vladimir Ivanovich, zaslushennyy deyatel' nauki i tekhniki,  
prof., doktor tekhn.nauk, inzh.-kapitan 1 rango; KHOMYAKOV, N.M..  
dotsent, otv.red.; MORNEVSKIY, B.I., dotsent, retsentsent;  
SANDLER, N.V., red. izd-va; KOTLYAKOVA, O.I., tekhn.red.

[Electric propelling machinery] Grebnye elektricheskie ustanovki.  
Leningrad, Izd-vo "Morskoi transport," 1958. 530 p. (MIRA 12:2)  
(Ship propulsion, Electric)

ROZEN, S.Ya.. Prinimali uchastiye: SEMENOV, V.A., kand.tekhn.nauk; MAKSI-  
MADZHI, A.I., kand.tekhn.nauk; NEMCHIKOV, V.I., kand.tekhn.nauk;  
KHOMYAKOV, N.M., doktor tekhn.nauk. POGREBNAYA, L.L., red.;  
BRUDNO, K.F., tekhn.red.

[German-Russian dictionary of water transportation] Nemetsko-  
russkii slovar' vodnogo transporta. Moskva, Gos.izd-vo fiziko-  
matem.lit-ry, 1959. 622 p. (MIRA 13:3)

(German language--Dictionaries--Russian)  
(Shipping--Dictionaries)

MELESHKIN, Georgiy Aleksandrovich; KHOMYAKOV, N.M., doktor tekhn. nauk, retsenzent; VILESOV, D.V., kand. tekhn. nauk, retsenzent; NESTEROV, Yu.A., nauchnyy red.; KVOCHKINA, G.P., red.; TSAL, R.K., tekhn. red.

[Marine synchronous generators with automatic voltage regulators] Sudovye sinkhronnye generatory s avtomaticheskimi regulirovaniem napriazheniya. Leningrad, Sudpromgiz, 1962. 275 p.  
(MIRA 15:10)

(Electric generators) (Electricity on ships)

MIKHAYLOV, Vitaliy Stepanovich; ROSIN, Yevgeniy Iosifovich;  
YAKOVLEV, G.S., ~~inzh. red.~~; ~~inzh. red.~~; KHOMYAKOV, N.M.,  
doktor tekhn. nauk, nauchnyy red.; SACHUK, N.A., red.;  
SHISHKOVA, L.M., tekhn. red.

[Electromechanical amplifiers of the longitudinal field on  
ships] Elektromashinnye usiliteli prodol'nogo polia na sudakh.  
Leningrad, Sudpromiz, 1963. 181 p. (MIRA 16:5)  
(Electricity on ships)

GLONYAGIN, Yuriy Vsevolodovich; KOROBOV, Pavel Konstantinovich;  
MARKOV, Edgem Trofimovich; MESHCHANINOV, Pavel  
Aleksandrovich; KITAYENKO, G.I., kand. tekhn. nauk,  
retsenzént; KHOMYAKOV, N.M., doktor tekhn. nauk,  
retsenzént; SMELOV, B.V., nauchn. red.; NIKITINA, M.I.,  
red.; CHISTYAKOVA, R.K., tekhn. red.

[Electric equipment and electric propulsion of ships]  
Elektrooborudovanie i elektrodvizhenie sudov. [By] IU.V.  
Gloniagin i dr. Leningrad, Sudpromgiz, 1963. 347 p.  
(MIRA 17:2)

DAVIDOVICH, Feliks Stanislavovich; PERSHINOV, Aleksandr  
Aleksandrovich; KHOMYAKOV, N.M., doktor tekhn. nauk,  
retsenzent; GANDIN, B.D., nauchn. red.; SACHUK, N.A.,  
red.

[Testing the electrical equipment of ships] Ispytaniia  
sudovogo elektrooborudovaniia. Leningrad, Sudostroenie,  
1964. 168 p. (MIRA 17:12)

BERNSHTEYN, M.B., dots.; GORYANOV, V.Yu., prof.; DENISOV, V.V.,  
inzh.-elektrik; KHOMYAKOV, N.M., prof., doktor tekhn.  
nauk; AKULOVA, Yu.I., inzh., retsenzent; REBO, I.Yu., red.

[Electrical engineering and electrical equipment of ships]  
Elektrotehnika i elektrooborudovanie sudov. [By] M.B.  
Bernshtein i dr. Moskva, Transport, 1964. 504 p.  
(MIRA 18:6)



KEOMIAKOV, N.M., doktor tekhn.nauk, prof. (Leningrad); PANOV, V.A.,  
kand.tekhn.nauk (Leningrad)

Determination of calculational electric loads for groups of  
short-term duration consumers. Elektrichestvo no.3:22-25  
Mr '64. (MIRA 17:4)

PANOV, Vladislav Aleksandrovich; YAKOVLEV, G.S., retsenzent;  
KHOMYAKOV, N.M., nauchn. red.; ROZENGAUZ, N.M., red.

[Marine electric power plants and the calculation of  
their capacity] Sudovye elektrostantsii i raschet ikh  
moshchnosti. Leningrad, Sudostroenie, 1965. 129 p.  
(MIRA 18:4)

YEMTSKOV, N.M.; PANOV, V.A.

Selecting the capacity of a marine electric power plant taking  
into consideration the effect of the cargo handling equipment.  
Sudostroenie no. 7:47-50 CI '65. (MIRA 18:8)

POLONSKIY, Vladimir Ivanovich; KHOMYAKOV, N.M., doktor tekhn. nauk  
prof., retsenzent; CRITSENKO, P.I., kand. tekhn. nauk, dots.  
retsenzent; FRIK, A.O., inzh., nauchn. red.; KAN, P.M., red.

[Electric equipment and electric propulsion of ships]  
Elektrooborudovanie i elektrodvikhennie sudov. Moskva,  
Transport, 1965. 321 p. (MIRA 18:12)

(N) L 27325-66

ACC NR: AM6001051

Monograph

URI  
34

Bernshteyn, M. B. (Docent); Goryainov, V. YU. (Professor); Denisov, V. V. (Engineer, Captain); Khomyakov, N. M. (Doctor of Technical Sciences, Professor) B41

Electrical engineering and electrical equipment for ships (Elektrotehnika i elektro-oborudovaniye sudov) Moscow, Izd-vo "Transport," 1964. 504 p. illus., biblio.  
Errata slip inserted. 10,300 copies printed

TOPIC TAGS: electrical engineering, marine equipment, electric equipment, power supply, power plant

PURPOSE AND COVERAGE: This book has been approved by the Department of Educational Institutions of the Ministry of Sea Transport as a textbook for students of mechanical specialties of maritime and Arctic schools of the ministry. It may also be useful to crew members concerned with operation of shipboard electrical equipment. The book deals with basic information on the principles of electrical engineering and magnetism. Characteristic features of electromagnetic energy, methods of its generation, transmission, and practical applications aboard ship are discussed. Circuit diagrams of shipboard electric drive controls are given.

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SUB CODE: 09, 13/ SUBM DATE: 05Nov64/ ORIG REF: 018/

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ALEKSEYEV, F.K.; ANDRIYUTS, G.L.; ARSENT'YEV, A.I.; ASTAF'YEV, Yu.P.;  
 BEVZ, N.D.; BEREZOVSKIY, A.I.; GEMERALOV, G.S.;  
 DOROSHENKO, V.I.; YESHCHENKO, A.A.; ZAPARA, S.A.; KALINICHENKO, V.F.;  
 KARNAUSHENKO, I.K.; KIKOVKA, Ye.I.; KOBOZEV, V.N.; KUPIN, V.Ye.;  
 LOTOUS, V.K.; LYAKHOV, N.I.; MALYUTA, D.I.; METS, Yu.S.; OVODENKO,  
 B.K.; OKSANICH, I.F.; PANOV, V.A.; POVZNER, Z.B.; PODORVANOV, A.Z.;  
 POLISHCHUK, A.K.; POLYAKOV, V.G.; POTAPOV, A.I.; SAVITSKIY, I.I.;  
 SERBIN, V.I.; SERGEYEV, N.N.; SOVETOV, G.A.; STATKEVICH, A.A.;  
 TERESHCHENKO, A.A.; TITOV, O.S.; FEDIN, A.F.; KHOMYAKOV, N.P.;  
 SHEYKO, V.G.; SHEKUN, O.G.; SESTAKOV, M.M.; SHTAN'KO, V.I.

Practice of construction and exploitation of open pits of Krivoy  
 Rog Basin mining and ore dressing combines. Gor. zhur. no.6:  
 8-56 Je '63. (MIRA 16:7)

(Krivoy Rog Basin--Strip mining)

KHOMYAKOV, N.V., kand.tekhn.nauk.

Second All-Union Scientific and Technical Conference on the  
electric propulsion of ships. Sudostroenie 24 no.1:77-79 Ja '58.  
(MIRA 11:2)

(Ship propulsion, Electric)

68495

S/136/60/000/02/013/022  
E111/E435

5.2200

AUTHORS: Meyerson, G.A., Shapiro, K.Ya. and Khomyakov, P.P.  
TITLE: New Method for Producing Chemically Pure Tungstic Acid  
PERIODICAL: Tsvetnyye metally, 1960, Nr 2, pp 58-63 (USSR)  
ABSTRACT: The authors have developed, under laboratory conditions, a new improved method of preparing pure tungstic acid, used in electrical engineering, on the basis of a proposal by K.Ya.Shapiro and A.I.Gedrayts (Author's Certificate Nr 120840, 1958) for using the double salt ammonium sodium paratungstate corresponding approximately to  $3(\text{NH}_4)_2\text{O} \cdot \text{Na}_2\text{O} \cdot 10\text{WO}_3 \cdot 15\text{H}_2\text{O}$ . This is precipitated, instead of calcium tungstate, from technical sodium tungstate solution with the aid of ammonium chloride and its use simplifies subsequent operations. The present investigation was on the influence of pH, concentration of initial sodium tungstate solution and excess of ammonium chloride on the crystallization and yield of the double salt. The behaviour of sodium and molybdenum as impurities at various stages in the process are also studied. Chemically pure sodium tungstate was used, the pH of the solution before addition of anhydrous ammonium

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## New Method for Producing Chemically Pure Tungstic Acid

chloride being adjusted by adding hydrochloric acid. pH values were determined with the aid of an LP-5 potentiometer. After crystallization, the double salt was separated and washed and its  $WO_3$  content determined. The double salt was decomposed with hydrochloric acid to give chemically pure tungstic acid. Table 1 shows  $WO_3$  yield, %, for pH values (of the  $Na_2WO_4$  solution) of 6.0, 7.0, 7.3 and 8.0 and different values of  $NH_4Cl$  excess (% of that required to form  $(NH_4)_2WO_4$ ) and molar ratio of  $NH_4^+ : Na^+$  in the solution. The yield rises with increasing excess of  $NH_4Cl$  and is a maximum (90%) at 120% and pH = 6.8 to 7.2. The influence of time and  $NH_4Cl$  consumption on the yield is shown diagrammatically indicating that the rate of increase of yield falls off sharply after the first 48 hours. Table 2 gives the yield for various crystallization times and  $Na_2WO_4$  solution concentrations of 100, 170, 240 and 280 g  $WO_3$ /litre: maximum yields are obtained at concentrations of 170 to 240 g/litre. On the whole it is not advisable to aim for yields of over 90% since

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New Method for Producing Chemically Pure Tungstic Acid

contamination of the double salt then occurs. Chemical analysis of the double salt obtained under optimum conditions showed its composition to be  $3(\text{NH}_4)_2\text{O} \cdot \text{Na}_2\text{O} \cdot 10\text{WO}_3 \cdot 15\text{H}_2\text{O}$ . Table 3 shows the Mo:WO<sub>3</sub> ratio and the degree of purification from molybdenum during the crystallization of the double salt and its decomposition by hydrochloric acid showing that, by treating by the proposed method molybdenum concentrates with 0.10 to 0.13% Mo relative to WO<sub>3</sub>, a product with Mo:WO<sub>3</sub> < 0.02% (ie satisfying the GOST) can be produced. The chemical compositions of two samples are compared in Table 4 with the specifications of GOST 2197-43 showing that all impurities are well below the specification. The new technology eliminates many of the operations applied in the current method, which uses calcium tungstate as an intermediate product, and brings about an almost complete separation of impurities. The authors recommend the semi-production testing of their method and its industrial adoption.

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New Method for Producing Chemically Pure Tungstic Acid

There are 1 figure, 4 tables and 5 references,  
3 of which are Soviet, 1 English and 1 French.

ASSOCIATION: Institut tsvetnykh metallov im. M.I.Kalinina  
(Institute of Non-Ferrous Metals imeni M.I.Kalinin)

Card 4/4

S/032/63/029/001/016/022  
B104/B186

AUTHORS: Khomyakov, P. P., Masterova, A. P., Adler, Yu. P., and  
Nalimov, V. V.

TITLE: Optimization of chloridizing a titanium-containing concentrate

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 1, 1963, 68-69

TEXT: In investigating the chloridization of a titanium-containing concentrate the ferrous chloride yield  $y$  was chosen as optimization parameter, this being closely related to the components of the melt. Temperature concentration of the alkali metal chlorides and the production rate of  $\text{FeCl}_2$  in the reactions  $2\text{FeO} + \text{C} + 2\text{Cl}_2 = 2\text{FeCl}_2 + \text{CO}_2$  and  $2\text{FeO} + 2\text{Cl}_2 = 2\text{FeCl}_2 + \text{O}_2$  influence the stability of these compounds. Independent variables:  $X_1$  is the concentration of ore in the melt (%),  $X_2$  is the temperature ( $^{\circ}\text{C}$ ),  $X_3$  the concentration of  $\text{KCl}$  in the melt (%),  $X_4$  the concentration of carbon in the melt (%). The experimenter knew that  $y$  was close to an extreme. The object is to find  
Card 1/2

Optimization of chloridizing a ...

S/032/63/029/001/016/022  
B104/B186

the maximum of  $y$  with a minimum of work. The interactions  $X_1X_3$ ,  $X_2X_3$  and  $X_3X_4$  are regarded as the most significant of the factors influencing the process. To obtain the interaction effects on the chloridizing process a minimum of eight tests was necessary. Considering the fact that  $y$  is close to an extreme, the conditions where  $y$  has a maximum are determined in eight tests by means of the programming matrix. The initial levels were:  $X_1 = 7.5$ ,  $X_2 = 725$ ,  $X_3 = 65$ ,  $X_4 = 4$ . The variation interval of  $X_1$  is 1, of  $X_2$  25, of  $X_3$  10 and of  $X_4$  1. There is 1 table.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoj promyshlennosti  
(State Design and Planning Scientific Research Institute of Rare Metals Industry)

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S/032/63/029/001/018/022  
B104/B186

AUTHORS: Khomyakov, P. P., Adler, Yu. P., and Nalimov, V. V.

TITLE: Investigation of the factors influencing the chloridizing properties of titanium slags in the melt

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 1, 1963, 75-77

TEXT: Using the method by G. E. Box and K. B. Wilson (J. Roy Stat. Soc. (B), 13, 1 (1951)) with programming matrices for experiments, the influence of the following factors on the chloridizing rate of titanium slags is investigated: chlorine consumption, temperature, carbon concentration, concentration of titanium dioxide in the melt, composition of the slag, composition of the melt. In 16 tests, 15 variables of the system were varied within so close a range that the results could be described by a polynomial of first order. It was possible to increase the chloridizing rate to 3.5 times the values hitherto known by using programming matrices and by neglecting effects of interaction. There is 1 table.

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Investigation of the factors ...

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B104/B186

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy  
institut redkometallicheskey promyshlennosti  
(State Design and Planning Scientific Research Institute  
of Rare Metals Industry)

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KHOMYAKOV, P.P.; ZHELTOVA, V.I.; ADLER, Yu.P.; NALIMOV, V.V.

Study of heat conductivity of distillates formed during  
chlorination of titanium slag in the melt. Zav.lab. 29  
no.3:330-331 '63. (MIRA 16:2)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy  
institut reaktivometallicheskoj promyshlennosti.  
(Titanium compounds)  
(Chlorination)  
(Heat capacity)

MUSATOV, A.,slesar'; KHOMYAKOV, S.,brigadir elektrikov; ZHELAGIN, G.,tokar';  
SEMIOSHIN, M.,slesar';

Tool for straightening and cutting steel wire up to 6 mm. in  
diameter. Na stroi.Mosk.' no.1:28 Ja '59. (MIRA 12:1)

1. Trest Mosstroy No.4 (for all). 2. Stroitel'nyy uchastok-21  
(for Musatov, Khomyakov). 3. Stroitel'nyy uchastok-19 (for  
Semioshin, Zhelagin).  
(Wire) (Cutting machinery)

FEL'DMAN, V.I., professor; KHOMYAKOV, S.A., direktor.

Pyoderma in children. Vest.ven.1 derm. no.4:28-30 J1-Ag '53. (MLR 6:9)

1. Detskaya poliklinika im. N.A.Semashko.

(Skin--Diseases)

KHOMYAKOV, S.S.

Work practices in the communications operations center in the  
Ivano-Frankovsk Province. Vest. svyazi 24 no.12:24 D '64  
(MIRA 18:2)

1. Nachal'nik Ivano-Frankovskogo ekspluatatsionno-tekhnicheskogo  
uzla svyazi.

KHOMYAKOV, V. G., KUZ'MIN, L. I. and MASHOVERS, V. P.

"Technology of Electrochemical Production", Tekhnologiya Elektrokhimicheskikh Proizvodstv, Goskhimizdat, 676 pp, 1949.

KHOMYAKOV, V.G., professor.

Industrial applications of electrochemistry. Khim.v shkole no.5:6-18 S-0 '53.  
(MLRA 6:9)  
(Electrochemistry)



*Khomyakov V.G.*

VOYTKEVICH, S.A.; Khomyakov, V.G.

Electrochemical regeneration of chromic acid without using  
diaphragm. Trudy VNIISNDV no.2:153-154 '54. (MLRA 10:7)  
(Chromic acid) (Electrolysis)

*Khomyakov, V. G.*  
USSR/Chemistry - Organic electrochemistry

FD-371

Card 1/1      Pub.50 - 4/24

Author : Khomyakov, V. G., Cand Tech Sci; Tomilov, A. P.; Fioshin, M. Ya.,  
~~Cand Tech Sci.~~

Title : Some prospects of the industrial application of the electrosynthesis  
of organic substances

Periodical : Khim. prom., No 6, 339-340 (19-20), Sep 1954

Abstract : Review some USSR and foreign work on the production of various organic  
chemicals by electrochemical methods. State that the electrochemical  
method is superior to purely chemical methods of industrial synthesis  
from the standpoint of the area occupied by the equipment and the purity  
of the products obtained, that the capacity of electrochemical equip-  
ment can be increased, and that the cost of power cannot be regarded as  
an obstacle to the application of electrochemical procedures. Advocate  
that research leading to the industrial application of electrochemical  
methods be conducted at special laboratories attached to institutes of  
the Academy of Sciences USSR, the Ministry of Chemical Industry, and  
other ministries. Twenty four references, 17 USSR, 8 since 1940.

Institution : Moscow Order of Lenin Chemicotechnological Institute imeni D. I. Mendeleyev.

Submitted :

KHOMYAKOV, V.G.

"Lowering of Electrode Potentials in Industrial Electrolysis,"  
by V. G. Khomyakov, Candidate of Technical Sciences and M. Ya.  
Fioshin, Candidate of Technical Sciences, Khimicheskaya Promy-  
shlennost', No 1, Jan/Feb 57, pp 30-32

After a detailed discussion on the basis of published data of the ef-  
fects on overvoltage of the mechanical treatment (sand blasting) of the  
electrode surface, plating of the surface of the cathode or anode with  
metals or metal alloys, and deposition of dispersed metal (sponge metal)  
on the electrode surface, the reasons why the electrode potential is re-  
duced when the surface of the electrode has been increased are subjected  
to consideration. The following conclusions are drawn from the data sum-  
marized in the article:

SUM. 1345

KHOMYAKOV, V.G.

"Experiments conducted by many investigators show that the potentials at which hydrogen and oxygen evolve in the electrolysis of water and the potential at which hydrogen evolves in the electrolysis of chlorides can be considerably lowered if the overvoltage is reduced by mechanical, chemical, or electrochemical treatment of the surface of the electrode in such a manner that this surface is increased. The lowering of potential achieved by this means generally amounts to 0.2-0.4 volt, which results in a considerable savings of electrical power (10-15% in the electrolysis of water and 5-10% in the electrolysis of sodium chloride). The best method of lowering the potentials of the evolution of hydrogen and oxygen in electrolysis comprise deposition of iron or nickel sponge on the surface of the electrode or coating the electrode with an alloy consisting of Ni and S. Extensive research must be done with the view of developing new electrode coatings which will reduce the overvoltage connected with the evolution of hydrogen and oxygen, will keep the potential constant in time in the presence of different impurities, and may be expected to exhibit sufficient corrosion resistance during the operation of industrial electrolysis cells."

The bibliography appended to the article lists 13 USSR references, 8 references to work done in Japan by K. Kanzaki, one US reference, and one Swiss reference. (U)

844-1345

Khomyakov, V. G.

AUTHORS

Khomyakov, V.G., Kruglikov, S.S.,  
Izgaryshev, N.A., Corresponding Member of the AN USSR. (Deceased)

20-3-38/59

TITLE

Electrochemical Oxidation of  $\beta$ -Picoline. (Elektrokhimicheskoye  
okisleniye  $\beta$ -pikolina).

PERIODICAL

Doklady Akademii Nauk, 1957, Vol. 115, Nr 3, pp. 557 - 559 (USSR.).

ABSTRACT

The easy electrochemical oxidation of picolines with the formation of the corresponding aldehydes and pyridine carbon acid together with oxidation products of the pyridine ring was proved by a number of publications. Data on the influence of the composition of the electrolyte and the electrolysis control on the production rate of the separate products are, however, missing. In this paper the results from the study of the process mentioned in the title are given. By preceding experiments it was shown, that  $\beta$ -picoline can only be oxidized electrochemically on platinum and lead anodes in acid media, if these anodes are previously covered with a layer of dioxide. Fig. 1 shows the influence of the quantity of current  $Q$ , which the electrolyte allowed to pass on the production of nicotinic acid, in its relation to substance and current. This acid can be easily oxidized further. Picoline, however, is oxidized much faster. The increase of nicotinic acid production at the beginning of the electrolysis, graphed over the current, indicates a transformation of unstable intermediate oxidation products of  $\beta$ -picoline, for ex. of pyridine -3- aldehyde, into nicotinic acid. A variation of the anode current density in the range from 1 to 10 Amps / dm<sup>2</sup> hardly

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20-3-38/59

Electrochemical Oxidation of  $\beta$ -Picoline

CIA-RDP86-00513R000722220018-

influences the nicotinic acid production. The decrease of production with dropping temperature is apparently connected with the growing specific weight of secondary reactions at high temperatures because the total current consumption remained almost stationary with rising temperatures. A marked change in the production of nicotinic acid takes place with rising acidity in the case of constant total velocity of the oxidation of organic substances. The maximum production of nicotinic acid can be reached at a comparatively wide "acidity-diapason": from 11 to 17 N. The rise in the acidity during the electrolysis at the expense of the electric transmission is proportional to the amount of electricity which was allowed to pass. Therefore the initial concentration of sulfuric acid in experiments which changing concentration of  $\beta$ -picoline was selected in such a way, that the average acidity in all experiments was about the same. It was not supposed to surpass the limiting values corresponding to the maximum production of nicotinic acid. (table 3). (There are 3 tables and 1 figure).

ASSOCIATION Moscow Chemical-Technological Institute imeni "D.I. Mendeleev".  
(Moskovskiy khimiko-tekhnologicheskii institut im.D.I.Mendeleeva).

SUBMITTED February 21, 1957.

AVAILABLE Library of Congress.

Card 2/2

KHOMYAKOV, V.G., kand.tekhn.nauk; FIOSHIN, M.Ya., kand.tekhn.nauk;  
KRUGLIKOV, S.S.

Electrochemical synthesis of organic substances. Khim. nauka i prom.  
3 no.4:432-438 '58. (MIRA 11:10)  
(Chemistry, Organic--Synthesis)  
(Electrochemistry)

SCV/64-58-6-4/15

AUTHORS: Khomyakov, V. G., Candidate of Technical Sciences, Fioshin,  
M. Ya., Candidate of Technical Sciences

TITLE: Electrochemical Methods for the Synthesis of Hydroxylamine  
(Elektrokhimicheskiye sposoby sinteza gidroksilamina)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 6, pp 335-340 (USSR)

ABSTRACT: The development of the production of caprolactam, which is the raw material of the synthetic fiber "Kapron", has in recent years stimulated interest in the synthesis of hydroxylamine, which is also used in the synthesis of such products as dimethyl glyoxime and isonitroso acetanilide. There are three methods of industrial production of hydroxylamine:  
1) the method suggested first by Raschig (Rashig) (Ref 4),  
2) the method commonly used in the United States by which nitro compounds of the aliphatic series are treated with concentrated solutions of mineral acids, and 3) the synthesis which consists of an electroreduction of nitric acid, nitrates, or nitrites. As far as the latter method is concerned, the references in question stress the technical importance of this process, but no further details are given. In connection

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SOV/64-58-6-4/15

Electrochemical Methods for the Synthesis of Hydroxylamine

with the electroreduction of nitric acid the data given by Acworth and Armstrong (Akvtort, Armstrong) (Ref 11) are mentioned. The first product of the reduction of nitric acid is nitrous acid which, according to Sihvonen (Sivonen) (Ref 12), forms a hypothetical bivalent acid with nitric acid. Furthermore, the formation of nitric oxide, hyponitrous acid, nitrogen suboxide, nitrogen and ammonia is discussed, and the conditions for a profitable production of hydroxylamine defined. In the discussion of the composition of the electrolyte, of the material of electrodes, of current density and temperature there are mentioned, among other things, data given by Tscherbakov and Libina (Shcherbakov and Libina) (Ref 17), Tafel (Ref 24), and Lazzari (Ref 26). In connection with the data used for the comparison of the chemical and electrochemical synthesis of hydroxylamine current prices of the ~~Krasnoyarskaya~~ GES and the power plants of the Angarsk Waterfalls are given. A number of advantages of the electrochemical method are enumerated. There are 3 tables and 39 references, 3 of which are Soviet.

Card 2/2



AUTHORS: ~~Khomyakov, V. G., Kruglikov, S. S.,~~ SOV/79-28-10-59/60  
~~Berezovskiy, V. M.~~

TITLE: Electrosynthesis of Nicotinic Acid (Elektrosintez nikotinovoy kisloty)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 10, pp 2898 - 2902 (USSR)

ABSTRACT: Only few papers have been published on the electro-chemical oxidation of  $\beta$ -picoline into nicotinic acid and of quinoline into quinolinic acid which is readily decarboxylized into the former. Thus attempts have been made to convert the  $\alpha$ -,  $\beta$ - and  $\gamma$ -picolines into the corresponding aldehydes by means of electrical oxidation, but yields were poor (Ref 1). In the same way, the electrolytical oxidation of  $\beta$ -picoline into nicotinic acid was carried out in 30% sulfuric acid, and that of quinoline into quinolinic acid was carried out in 75-80% (Ref 2). There are also well-known attempts to obtain nicotinic acid from nicotine, anabasine, and N-methylanabasine by means of electrosynthesis

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Electrosynthesis of Nicotinic Acid

SOV/79-28-1c-59/60

(Refs 4-6). The electrochemical synthesis of the two acids is of great interest as it dispenses with oxidizing agents and catalysts; however, publication data on this synthesis do not suffice to warrant its practical utilization. In the paper under consideration, which deals with the electrochemical oxidation of  $\beta$ -picoline, the authors have investigated the influence on the nicotinic acid yield of the current quantity flowing through the electrolyte, of the current density, temperature, of the added quantities of  $Mn^{++}$  and  $Cr^{+++}$ , of the  $\beta$ -picoline concentration and of the sulfuric acid concentration. An investigation was also made into the effect of the conditions under which the electrolysis is carried out on the speed of the electrooxidation of  $\beta$ -picoline into nicotinic acid. In addition to this, the influence of the concentration of sulfuric acid and of quinoline on the quinolinic acid yield in the electrooxidation of quinoline was examined. There are 2 figures, 6 tables, and 9 references, 5 of which are Soviet.

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Electrosynthesis of Nicotinic Acid

SOV/77-28-10-59/60

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut imeni D.I. Mendeleyeva i Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut (Moscow Chemotechnological Institute imeni D.I.Mendeleyev and All-Union Scientific Research Institute of Vitamins)

SUBMITTED: July 19, 1957

Card 3/3

KHOMYAKOV V.E.

PHASE I BOOK EXPLOITATION 307/2216

5(4)

Soveshchaniye po elektrokhemii. 4th, Moscow, 1956.  
Trudy... [sbornik] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow, Izd-vo AN SSSR, 1956. 868 p. Errata slip inserted. 2,500 copies printed.  
Sponsoring Agency: Akademiya nauk SSSR, Otdeleniye khimicheskikh nauk.

Editorial Board: A.M. Frenkin (Resp. Ed.) Academician, O.A. Yesin, Professor, S.I. Zhdanov (Resp. Sec.) Prof., B.M. Kabanov, Prof., Ya. M. Kolotyrkin, Doctor of Chemical Sciences, V.V. Korotkiy, Prof., D.D. Lukovtsev, Professor, Z.A. Solov'yeva, V.V. Stender, Prof., and O.M. Florianovich; Ed. of Publishing House M.G. Vostokov; Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chemical Sciences and the Institute of Physical Chemistry, Academy of Sciences USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and galvanic processes in metal electrodeposition and industrial electrolysis. Abridged discussions are given at the end of each division. The majority of reports not included here have been published in periodical literature and personalities are mentioned. References are given at the end of most of the articles.

Krasil'shchikov, A.I. (Gosudarstvennyy institut atomnoy promyshlennosti - State Institute of the Nitrogen Industry). Electrochemical Reactions of Oxygen 272

Gorbovich, M.A. (Deceased), and B.I. Kaganovich (Moscow State University). Study of the Mechanism of Some Anodic Processes by Combining Electrochemical and Tagged-Atom Methods 277

Shlygin, A.I., and O.A. Bogdanovskiy (Moscow State University). Mechanism of the Electrochemical Oxidation of Some Compounds on Platinum 282

Khomyakov, V.G., M.O. Rukhchisaryats'yan, and A.P. Tomilov (Moskovskiy khimiko-tekhnicheskii institut izeni D.I. Mendeleeva-Moscow Institute of Chemical Technology named D.I. Mendeleev). Mechanism of the Electrolytic Oxidation of Acetone in Alkaline Solutions 287

Khomutov, M. Ye. (Moscow Institute of Chemical Technology named D.I. Mendeleev). Mechanism of Some Irreversible Elect-

Card 12/34

polytic-Oxidation Reactions 292

Pomenko, A.S., T.M. Abramova and I.L. Gankina (Institut fizicheskoy khimii AN USSR-Institute of Physical Chemistry AS USSR). Mechanism of the Corrosion of Iron, Magnesium, Zinc and Aluminum With the Aid of Heavy Oxygen Isotopes 299

Discussion (A.M. Gluzberg, A.P. Tomilov, P.D. Lukovtsev, O.A. Fedoradze and contributing authors) 302

PART IV. ELECTRODE PROCESSES IN FUSIONS 309

Yesin, O.A. (Ural'skiy politekhnicheskii institut i Ural Polytechnic Institute). Electrode Processes in Fused Oxides 311

Plomtyell, R., G. Sternheim, M. Prandini, and G. Montanelli (Italy). Investigation of Overvoltage Phenomena in Fused Salts 323

Card 13/34

5(1) 5(2)

SOV/64-59-4-4/27

AUTHORS:

Khomyakov, V. G., Fioshin, M. Ya., Tomilov, A. P.

TITLE:

Electrochemical Methods of the Synthesis of Some Initial Materials for High Polymers (Elektrokhimicheskiye metody sinteza nekotorykh iskhodnykh materialov dlya vysokopolimerov)

PERIODICAL:

Khimicheskaya promyshlennost', 1959, Nr 4, pp 16 - 20 (USSR)

ABSTRACT:

Some examples of applying electrolytical methods for the production of polymers are given and discussed. Manufacturing methods of raw materials being important for the production of polyamide resins, as for example hexamethylene diamine or adipinic acid dinitrile and dibasic dicarboxylic acids, among them mainly sebacic acid, are discussed. Also the production of organofluorine compounds by electrochemical fluorination of the dissolved organic substances or carbon chlorides are discussed. The electrosyntheses of pinacon being important for the production of some types of rubber is also described. It is pointed to the fact that the theoretically interesting electrochemical initiation of the polymerisation reaction will also be of practical importance. These reactions, however, are not yet sufficiently investigated and further investigations have

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Electrochemical Methods of the Synthesis of Some  
Initial Materials for High Polymers

SOV/64-59-4-4/27

to be carried through. By means of the electrochemical initiation of the methyl methacrylate polymerisation the course of the polymerisation initiation is represented according to data by G. Parravano (Ref 39). There are 40 references, 5 of which are Soviet.

Card 2/2

5(1),5(3)

AUTHORS:

Khomayakov, V.G., Candidate of Technical Sciences, Tomilov, A.P., Candidate of Technical Sciences  
S/064/59/000/07/003/035  
B005/B123

TITLE:

Examples of the Possible Use of Electrolysis of Organic Compounds in Industry

PERIODICAL:

Khimicheskaya promyshlennost', 1959, Nr 7, pp 566-573 (USSR)

ABSTRACT:

In the present paper the authors offer examples to confirm their statement that by using electrochemical methods in organic synthesis it is often possible to use more accessible initial substances, and thus to simplify considerably the whole technological process. The article consists of an enumeration and a short discussion of a great number of electrochemical methods of synthesis that are described in publications. The article is divided into the following sections: Anode processes (oxidation, substitution); cathode processes (reduction of multiple bonds between two carbon atoms, reduction of functional groups, replacement of halogen by hydrogen); reactions of free radicals that can appear in a series of cathode- and anode processes. In this last section interactions of the free radical

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Examples of the Possible Use of Electrolysis  
of Organic Compounds in Industry

S/064/59/000/07/003/035  
B005/B123

with electrode material, disproportionation, dimerization, interaction with unsaturated compounds and internal electrolysis are discussed. Finally, the authors come to the conclusion that the objections raised to the use of the methods in question, will lose their validity in the course of technical development. The method of electrochemical synthesis of organic substances, however, has two great disadvantages: 1) low productivity of apparatus. The electrochemical synthesis mainly functions on the electrodes; the majority of these processes takes a relatively slow course, so that the current densities are restricted to 200-600 a/m<sup>2</sup>. An intensification of electrode processes can be achieved by acceleration (catalysis, selection of hydrogen- and oxygen carriers) or by the manufacture of electrodes with very great (spongy or porous) surfaces. 2) Quick inactivation of the electrode, that often leads to a quick decline of yield. Reactivating the electrodes is a difficult procedure in the course of which the apparatus has to be taken apart. The simplification of this reactivation is a problem that has to be solved in order to guarantee the industrial use

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Examples of the Possible Use of Electrolysis  
of Organic Compounds in Industry

S/064/59/000/07/003/035  
B005/B123

of many electrochemical processes of organic synthesis. There  
are 2 figures and 72 references, 19 of which are Soviet. ✓

Card 3/3

KHOMYAKOV, V.G.; BAKHCHISARAYTS'YAN, H.G.; TOMILOV, A.P.

Mechanism of the electrolytic oxidation of acetone in alkaline  
solutions. Trudy MKBTI no.26:191-198 '59. (MIRA 13:9)  
(Oxidation, Electrolytic) (Acetone)

AUTHORS: Avrutskaya, I. A., Khomyakov, V. G., S/076/60/034/03/034/038  
Fioshin, M. Ya. B005/B016

TITLE: Reduction of Nitrocyclohexane on the Dropping Mercury Cathode

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol 34, Nr 3, pp 691-692 (USSR)

TEXT: In connection with the investigation of the electrochemical reduction of nitrocyclohexane the authors studied the reduction of this compound on a dropping mercury electrode. Measurements were carried out on PE-312<sup>28</sup> and M-103<sup>28</sup> polarographs. A saturated calomel electrode was used as an auxiliary electrode. As nitrocyclohexane is poorly soluble in water, 20% alcoholic solutions were investigated. The buffer mixtures used for the adjustment of various pH ranges are given. Figure 1 shows the polarogram of nitrocyclohexane in a solution of  $\text{Na}_2\text{HPO}_4$  and citric acid with pH 2.2. At pH 1 - 4 only one wave occurs which corresponds to the reduction of nitrocyclohexane to cyclohexyl hydroxylamine. At pH 5 - 7 a second wave appears in the polarogram, which does not occur in stronger acid solutions owing to hydrogen separation. The second wave has only about half the strength of that of the first wave; the acceptance of two electrons corresponds to it according to the Ilkovich equation. The second wave therefore corresponds to the reduction of cyclohexyl hydroxylamine to cyclo-

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**Reduction of Nitrocyclohexane on the Dropping  
Mercury Cathode**

S/076/60/034/03/034/038  
B005/B016

hexylamine. At pH 9 - 11 again only the first wave appears. The second polarographic wave of nitrocyclohexane is thus stable only in a small pH range. At pH 11 - 12 the limiting current of the first wave begins to drop gradually, and in 0.1 N potassium hydroxide nitrocyclohexane is not reduced any longer on the dropping mercury electrode. This reduction of the diffusion current is obviously due to a tautomeric transition of the nitro compound occurring in molecular form in alkaline medium to the anionic form of a pseudo-acid, which is not reduced at the attainable potentials. In the electrochemical reduction of nitrocyclohexane on cathodes of platinum, copper, and lead in acid solutions the authors obtained cyclohexyl hydroxylamine as reaction product in a wide pH-range. The oxime of caprolactam could not be detected among the products. The reason for this phenomenon is the impossibility of stopping the reduction process at the stage of nitroso-cyclohexane from which the oxime of caprolactam results by rearrangement (Ref 3). The potentials at which nitroso-cyclohexane is reduced are less negative than in the case of nitrocyclohexane; it is therefore not concentrated in the solution, but is further reduced to give cyclohexyl hydroxylamine. The rate of this reduction is evidently higher than the rate of rearrangement, so that the wave of reduction to nitroso-cyclohexane does not

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Reduction of Nitrocyclohexane on the Dropping  
Mercury Cathode

S/076/60/034/03/034/038  
B005/B016

appear in the polarogram of nitrocyclohexane. Figure 2 shows the polarograms of nitrocyclohexane and cyclohexyl hydroxylamine at pH 6 in a solution of  $\text{Na}_2\text{HPO}_4$  and citric acid. There are 2 figures and 3 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D. I. Mendeleeva  
(Moscow Institute of Chemical Technology imeni D. I. Mendeleev)

SUBMITTED: July 31, 1959

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34381

S/539/61/000/032/007/017  
D202/D301

11.1265

AUTHORS: Khomyakov, V.G., Gusakov, D.Ya. and Podberezina, A.S.

TITLE: Electrochemical synthesis of hexamethylene diamine

SOURCE: Moscow. Khimiko-tekhnologicheskiy institut. Trudy, no. 32, 1961. Issledovaniya v oblasti elektrokhemii, 141-146

TEXT: The subject of this experimental work was to find out quantitative data for electrolysis conditions which influence the yield of hexamethylene diamine (HMD) from adipodinitrile as the starting material. The authors used adipodinitrile solutions in HCl as the electrolyte and spongy nickel deposit as the cathode. The reduction of adipodinitrile to HMD proceeds according to the scheme:  $CN - (CH_2)_4 - CN + 8 H^+ + 8 F^- \rightarrow$

$NH_2(CH_2)_6 - NH_2$ . Small amounts of E-aminocapronitrile and hexamethylene imine were found in the reaction products which proved that the reduction of adipodinitrile proceeds in stages. The authors investigated the effects 1) of adipodinitrile concentration; 2) of HCl concentration;

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D202/D301

Electrochemical synthesis ...

3) of temperature; 4) of the amount of electricity used. 1) With rising adipodinitrile content from 50 to 100 g/l the rate of its reduction was markedly increased, the formation of side-products increasing to a much lesser extent. 2) With the rise of HCl concentration the yield of HMD decreased; therefore, in further experiments 10-11.4% HCl solutions were used. 3) The rise in temperature from 20 to 35 °C has an unfavorable effect. 4) The effect of electricity consumption was studied on solutions of 97 g/l of adipodinitrile in 10% HCl with c.d. 10 a/dm<sup>2</sup>, at 20 °C, with electricity consumption from 50 to 150% of the theoretically needed (8F/mol). The authors found that the electricity consumption on the summary reduction process decreased steadily with decreasing reagent concentration; when the energy consumption was equal to the theoretical, the yield of HMD was about 60% both in respect to the current and to the reagent, being equal to 43% and 67% respectively when 150% of theoretical energy amount was used. The authors state that E-aminotapronitrile fraction may be re-used in further processes; in this was the total HMD yield may be increased by about 10%; that the studied method of HMD synthesis is much simpler than the chemical one; that by this method chlorine is produced as a by-product in the amount of  $\pm 6$  tons per ton of HMD. Full

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Electrochemical synthesis ...

S/539/61/000/032/007/017  
D202/P301

experimental details are given as well as details of the results obtained. There are 6 figures, 1 table and 9 references: 1 Soviet-bloc and 8 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: P.B. Janardhanan, J.Sci.Ind. Research (India) 12B, 183 (1953); K. Oqura, Memoirs Coll. Science (Kyoto Imp. Univ.) Ser. A, 12, 339 (1929); Fumikazu Kawamura, Shigetaka Suzuki, J. Chem. Soc. Japan, Ind. Chem. Sect. 55, 476, (1952); Masaku Ohta, J. Chem. Soc. Japan, 63, 1762, (1942).

Card 3/3



CHEREMISINA, N.V.; VOLKOV, G.I.; KHOMYAKOV, V.G.

Decomposition of sodium amalgam in a short-circuited galvanic  
element. Zhur.prikl.khim. 34 no.10:2268-2275 C '61. (MIRA 14:11)  
(Amalgams) (Electrochemistry)

31177  
S/080/61/034/012/016/017  
D243/D305

S.3610 2209

AUTHORS: Khomyakov, V.G., Fioshin, M.Ya., Avrutska, I.A., and  
Shih-chi, Ye.

TITLE: The electrochemical synthesis of cyclohexylhydroxyl-  
amine

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 12, 1961,  
2788 - 2791

TEXT: Cyclohexylhydroxylamine is not produced on an industrial scale at present, but may serve as an intermediate product in the synthesis of materials for the plastics and lacquer-paint industries. The technological advantage of electrochemical synthesis is that it can be effected at ordinary temperatures and pressures. The present study is a follow-up of a previous report by the same team (Ref. 7: Tr. MKhTI, XXXII, 165, 1961) on the electrochemical reduction of nitrocyclohexane, in which cyclohexylhydroxylamine was formed as an intermediate product, the yield depending on the catalyte acidity and current density. The catalyte was a solution

Card 1/2

KHOMYAKOV, V.G.; FIOSHIN, M.Ya.

Latest in the field of the electrochemical synthesis of oxidizers.  
Khim.prom. no.1:30-37 Ja '62. (MIRA 15:1)  
(Oxidizing agents) (Electrochemistry)

KHOMYAKOV, V. G.; FIOSHIN, M. Ya.; AVRUTSKAYA, I. A.; SEDOVA, S. S.

Electrochemical reduction of nitrocyclohexane in an aqueous medium. Zhur. VKHO 7 no.5:584-585 '62. (MIRA 15:10)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni D. I. Mendeleeva.

(Cyclohexane) (Reduction, Electrolytic)

ACCESSION NR: AT4010616

S/3051/63/000/000/0310/0313

AUTHOR: Khomyakov, V. G.; Guskova, D. Ya.

TITLE: Electrohydration of adipic acid dinitrile

SOURCE: Kataliticheskiye reaktsii v zhidkoy faze. Trudy\* Vsesoyuznoy konferentsii. Alma-Ata, 1963, 310-313

TOPIC TAGS: electrohydration, adipic acid, nitrile, adipic acid dinitrile, nitrile hydration, electrochemistry, hexamethylenediamine, cathode regeneration

ABSTRACT: Seeking a continuous process for the electrohydration of adipic acid dinitrile to hexamethylenediamine, which is disturbed by the fading in the performance of the cathode with time, the authors activated a nickel cathode by the following treatment: first, anodic polarization of the cathode in an alkaline solution; second, treatment of the cathode with 30%  $H_2O_2$ ; third, anodic polarization in the working catholyte; and fourth, addition of finely-dispersed Ni to the working catholyte. The test showed that all the methods completely restored the cathode. The most practical method, however, was the periodic addition of 0.75 g  $NiCl_2$  for each 1  $dm^2$  of the cathode surface. Orig. art. has: 5 tables.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D. I. Mendeleyeva  
Card 1/2

ACCESSION NR: AT4010616

(Moscow Chemico-technological Institute)

SUBMITTED: 00

DATE ACQ: 25Jan64

ENCL: 00

SUB CODE: GC

NO REF SOV: 002

OTHER: 001

Card 2/2

KHOMYAKOV, V.G.; TOMILOV, A.P.

Effect of the structure of a zinc cathode on the electrolytic reduction  
of acetone. Zhur.prikl.khim. 36 no.2:373-378 F '63. (MIRA 16:3)  
(Electrodes, Zinc) (Acetone) (Reduction, Electrolytic)

KHOMYAKOV, V.G.; TOMILOV, A.P.

Effect of electrolysis conditions on the reduction of acetone on a zinc  
cathode. Zhur.prikl.khim. 36 no.2:378-385 F '63. (MIRA 16:3)  
(Acetone) (Reduction, Electrolytic) (Electrodes, Zinc)



AVRUTSKAYA, I.A.; KHOMYAKOV, V.G.; FIOSHIN, M.Ya.

Polarographic analysis of cyclohexylhydroxylamine in the  
presence of nitrocyclohexane. Zav. lab. 30 no.1:28-29  
'64. (MIRA 17:9)

1. Moskovskiy khimiko-tekhnologicheskii institut.

KRIT, A. G.: KHOMYAKOV, V. M.: NAYFEL'D, M. R.

KRIT, A. G.; KHOMYAKOV, V. M.; NAYFEL'D, M. R.

Electric Transformers

Letters from readers, Rab, energ, no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952, UNCLASSIFIED.

KRIT, A. G.: KHOMYAKOV, V. M.; NAYFEL'D, M. R.

KRIT, A. G.; KHOMYAKOV, V. M.; NAYFEL'D, M. R.

Electric Insulators and Insulation

Letters from readers, Rab, energ, 2, no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952, UNCLASSIFIED.

KRIT, A. G.: KHOMYAKOV, V. M.: MAYFEL'D, M. R.

KRIT, A. G.; KHOMYAKOV, V. M.; MAYFEL'D, M. R.

Electric Currents

Letters from readers, Rab, energ. 2 no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952, UNCLASSIFIED.

AID P - 3243

Subject : USSR/Electricity  
Card 1/1 Pub. 29 - 28/30  
Author : Khomyakov, V. M.  
Title : Cleaning insulators at an outdoor 35/6-kv substation  
Periodical : Energetik, 8, 38-39, Ag 1955  
Abstract : Replying to question by a reader, the author describes briefly the methods used to clean outdoor substation insulators soiled by a solid film consisting of calcareous and soda dusts and deposits from flue stacks.  
Institution : None  
Submitted : No date

KHOMYAKOV, V.M., inzhener

Experimental data on the estimation of moisture in transformers.  
Elektrichestvo no.10:24-28 0'55. (MIRA 8:12)

1. VVS Moskovskogo rayonnogo upravleniya energokhozyaystva  
(Electric transformers) (Insulating oils)

KHOMYAKOV, V.M.

Testing of electric motors and insulators. Energetik 10  
no.11:36 N '62. (MIRA 15:12)

(Electric motors—Testing)

(Electric insulation and insulators—Testing)

KHOMYAKOV, V.N.

Velgo-Vyatska zona. Zemledelie-27 no.9:79-80 S '65.

(MIRA 18:10)

1. Nachal'nik agrometeorologicheskoy stantsii Royka, Gor'kovskoy oblasti.



KHOMYAKOV, V.N.

Effect of agrometeorological conditions on the effectiveness of using molybdenum for the purpose of increasing the harvest of pea seeds.  
Meteor. i gidrol. no.8:37-40 Ag '65. (MIRA 18:7)

1. Agrometeorologicheskaya stantsiya Royka, Verkhne-Volzhskoye upravleniye gidrometeorologicheskoy sluzhby.

S/122/63/000/003/004/008  
A004/A127

AUTHORS: Trifonov, Ye.V., Candidate of Technical Sciences, Yampol'skiy, S.L.,  
Khomyakov, V.P., Sarapov, O.P., - Engineers

TITLE: The effect of some design parameters of segmental slide thrust  
bearings on their efficiency

PERIODICAL: Vestnik mashinostroyeniya, no. 3, 1963, 20 - 27

TEXT: The authors give an account of experimental investigations performed at the Kaluzhskiy turbinny zavod (Kaluga Turbine Plant) on tilting-pad thrust bearings which were aimed at elucidating the dependence of their carrying power on some design parameters which are not taken into consideration by the universally adopted calculation methods. The bearings were tested at speeds of 30 - 70 m/sec, which is characteristic of steam and gas turbines. The main features of the tested thrust bearings are presented in a table. The major purpose of the tests was to determine the magnitude of the bearing breaking load under various operation conditions and of different designs of segmental thrust bearings. The following factors were investigated: effect of the number of tilting

Card 1/2

The effect of some design parameters of .....

S/122/63/000/003/004/008  
A004/A127

pads on the functioning of the thrust bearing, pad material, geometrical shape of the pads, and effect of the sliding speed on the carrying power of thrust bearings. The authors present a detailed description of the tests concerning the factors mentioned and give a number of recommendations in designing thrust bearings of the type tested. There are 7 figures and 2 tables.

Card 2/2

ACHERKAN, Naum Samoylovich, zasl. deyatel' nauki i tekhniki RSFSR,  
doktor tekhn. nauk, prof.; GAVRYUSHIN, A.A.; YERMAKOV, V.V.;  
IGNAT'YEV, N.V.; KAKOYLO, A.A.; KUDINOV, V.A.; KUDRYASHOV,  
A.A.; LISITSYN, N.M.; MIKHEYEV, Yu.Ye.; PUSHKIN, N.S.; TROFIMOV,  
O.N.; FEDOTENOK, A.A.; KHOMYAKOV, V.S.; ABANKIN, V.I., inzh.,  
retsenzent

[Metal-cutting machines in two volumes] Metalloreshmushchie  
stanki. [v dvukh tomakh]. Pod red. N.S.Acherkana. Moskva,  
Mashinostroenie. Vol.2. 2. perer. izd. 1965. 628 p.  
(MIRA 18:12)

ACHERKAN, N.S., doktor tekhn. nauk, prof., zasl. doyatel' nauki  
i tekhniki RSFSR; GAVRYUSHIN, A.A., kand. tekhn. nauk;  
YERMAKOV, V.V., kand. tekhn. nauk, dots.; IGNAT'YEV, N.V.,  
kand. tekhn. nauk, dots.; KAKOYLO, A.A., inzh.; KUDINOV,  
V.A., kand. tekhn. nauk; KUDRYASHOV, A.A., kand. tekhn. nauk,  
dots.; LISITSYN, N.M., kand. tekhn. nauk, dots.; MIKHEYEV,  
Yu.Ye., dots.; PUSH, V.E., doktor tekhn. nauk, prof.;  
TRIFONOV, O.N., kand. tekhn. nauk, dots.; FEDOTENOK, A.A.,  
doktor tekhn. nauk, prof.; KHOMYAKOV, V.S., kand. tekhn.  
nauk; ABANKIN, V.I., inzh., retsenzent

[Metal cutting machines] Metallorezhushchie stanki. Moskva,  
Mashinostroenie. Vol.1. 1965. 764 p. (MIRA 18:10)

KHOMYAKOV, V.S., prepodavatel'

Structural damping in a belt transmission in case of cyclic loading.  
Izv. vys. ucheb. zav.; mashinostr. no.6:86-94 '65.  
(MIRA 18:8)

KHOMYAKOV, V.S., inzh.

Determining dynamic rigidity and damping coefficients of  
a V-belt transmission. Vest.mashinostr. 45 no.8:25-27  
Ag '65. (MIRA 18:12)

*Khomyakov, Ye. M.*

SAKHAROVA, N.A., inzh.; ~~Khomyakov, Ye. M., kand. tekhn. nauk;~~ GOLIK, Ye. M.,  
inzh.

Evaluating the specific crushing strength of ceramic materials.  
Nov. v stroit. tekhn., no. 5:5-21 '54. (MIRA 10:11)

1. Nauchno-issledovatel'skiy institut stroitel'nykh materialov Aka-  
demii arkhitektury USSR.  
(Ceramic materials--Testing)



KHOMYAKOV, Ye.M., kand.tekhn.nauk

Fatigue resistance of nonrigid-type pavements. Avt.dor.i  
dor.stroi. no.1:108-116 '65.

(MIRA 18:11)

KHOMYAKOV, Yu.M.; POPOVA, T.I.

Emergency splenectomy for uterine hemorrhage in Werlhof's disease. Akush. i gin. 39 no.4:78-79 J1-Ag'63 (MIRA 16:12)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. I.D.Korabel'nikov) Chelyabinskogo meditsinskogo instituta i khirurgicheskogo otdeleniya bol'nitsy Chelyabinskogo metal-lurgicheskogo zavoda (glavnyy vrach O.V.Garbuz).

KHOMYAKOV, Yu.M. (Chelyabinsk, prospekt Lenina, d.33-a, kv.67)

Diagnostic errors in spinal lesions. Ortop., travm. i protez. 25  
no.6:65 Je '64. (MIRA 18:3)

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Korabel'nikov) Chelyabinskogo meditsinskogo instituta (rektor -  
dotsent P.M. Tarasov).

KHOMYAKOV, Yu.M.

Radiography of the spleen and portal vein experimental investigations. Vest.rent.i rad. no.1:54-56 Ja-F '55. (MLRA 8:5)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (sav. prof. I.D. Korabel'nikov) Chelyabinskogo meditsinskogo instituta (dir. prof. G.D.Obrastsov).

(ANGIOGRAPHY,

splenoportography)

(VEINS, PORTAL SYSTEM, radiography,  
splenoportography)